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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/667,203	HINSHAW ET AL.
Office Action Summary	Examiner	Art Unit	
	KIMBERLY LOVEL	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 October 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-13</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-13</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/14/08 & 8/21/08</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.　　Claims 1-14 are rejected.

2.　　In view of the Appeal Brief filed on 3 October 2008, PROSECUTION IS HEREBY REOPENED.

　　　To avoid abandonment of the application, appellant must exercise one of the following two options:

　　　(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

　　　(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

　　　A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Information Disclosure Statement

3.　　The information disclosure statements (IDS) submitted on 14 July 2008 and 21 August 2008 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

4.   Claims 8, 9 and 11 are objected to because of the following informalities:

5.   Claim 8 recites the limitations "the output FIFO write pointer" and "the present

tuple." There are insufficient antecedent basis for these limitations in the claim.

6.   Claim 9 recites the limitation "the overflow filter bit." There is insufficient

antecedent basis for this limitation in the claim.

7.   Claim 9 mentions that a length field is appended to record fragments. Since

records have not been previously mentioned, it is unclear if the record fragments are the

same as the tuples, a part of the tuple or etc.

8.   Claim 11 recites the limitation "the TID mode." There is insufficient antecedent

basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the

various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10.　　**Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,434,649 to Baker et al (hereafter Baker) in view of US PGPub 2003/0126056 to Hausman et al (hereafter Hausman) in view of US Patent No 5,983,270 to Abraham et al (hereafter Abraham).**

　　　　Referring to claim 1, Baker discloses a Programmable Streaming Data Processor (PSDP) arranged to perform primitive initial processing functions directly on a set of data (see abstract; column 1, lines 48-58; and Fig 1A, item 100 – the multimedia processor is considered to represent the programmable streaming data processor since it comprises of the same components and is a data processor for streaming which can be programmed), comprising:

　　　　a streaming data interface, arranged to receive data from a streaming data source (see column 5, lines 59-68 and Fig 1, items 122 and 132);

　　　　a streaming interface First In First Out (FIFO) [first-in-first-out buffer], arranged to temporarily store streaming data from the streaming data interface (see column 17, lines 25-45; column 18, lines 13-22; and Fig 7, item 716 – the interface uses a first-in-first-out buffer; according to the 5th Edition of Microsoft's Computer Dictionary, the

definition of a buffer states "a region of memory reserved for use as an intermediate repository in which data is temporarily held while waiting to be transferred between two locations or devices"); and

an output First In First Out (FIFO) device, for forming tuples [outgoing data] and temporarily storing them prior to conditionally forwarding them to the Job Processing Unit (see column 18, lines 18-22 and column 30, lines 22-32).

Baker discloses a Programmable Streaming Data Processor (PSDP) which is arranged to perform primitive functions directly on data received from a streaming data interface, however, Baker et al fails to explicitly teach the further limitations of the data engine and the tuple generator.

Hausman discloses a streaming data interface arranged to receive data from a streaming data source [application(s) 122 and database(s) 121] (see [0039], lines 10-15; [0043], lines 15-16), a streaming interface arranged to temporarily store streaming data from the streaming data interface [queue 108] (see [0043], lines 15-16) and the further limitations of a data engine, arranged to receive output data from the streaming interface, determine field boundaries therein, and process fields to select one or more fields to be assembled into output tuples, the data engine also containing logic arranged to determine whether an output tuple is to be selected for further processing by additional processing Job Processing Units (JPUs) and to assert a use or lose decision value according to that determination [re-ordering, deleting, editing and/or adding elements] (see [0045]; [0048]; and [0057]); and an output device arranged to

temporarily store tuples [data] prior to conditionally forwarding them to the JPU [cache records until users are ready to use them] (see [0071]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to Hausman's method of filtering data as a subcomponent to Baker et al's Data Streamer. One would have been motivated to do so since it is well known to one of ordinary skill that filtering provides customized distribution of data and also decreases that the amount of information sent across the network (Hausman: see [0005]).

While the combination of Baker and Hausman (hereafter Baker/Hausman) discloses a tuple generator, arranged to assemble fields into the output tuple (see [0065]), Baker/Hausman fails to explicitly disclose the further limitation wherein if the use or lose decision value indicates that such the output tuple is to be discarded, to prevent the output tuple from being transferred for further processing by the JPU. Abraham discloses the filtering of data packets, including the further limitation wherein if the use or lose decision value indicates that such the output tuple is to be discarded, to prevent the output tuple from being transferred for further processing by the JPU [allow/deny] (see column 46, line 54 – column 47, line 30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of filtering the output tuples of Baker/Hausman in the manner disclosed by Abraham. One would have been motivated to do so in order to increase efficiency by limiting the amount of information transferred.

　　　　Referring to claim 2, the combination of Baker/Hausman and Abraham (hereafter Baker/Hausman/Abraham) discloses an apparatus as in claim 1 wherein the use or lose value indicates a result from logic processing of fields read from the streaming data interface (Baker: see column 17, line 52 – column 18, line 12; Abraham: see column46, line 54 – column 47, line 30).

　　　　Referring to claim 3, Baker/Hausman/Abraham discloses an apparatus as in claim 1 wherein the use or lose decision value indicates a result from Transaction Identifier (TID) processing (Hausman: see [0063] and [0064]).

　　　　Referring to claim 4, Baker/Hausman/Abraham discloses an apparatus as in claim 3 wherein the TID processing and data engine logic execute in parallel (Hausman: see [0063] and [0064]).

　　　　Referring to claim 5, Baker/Hausman/Abraham discloses an apparatus as in claim 1 wherein the output tuple is greater in length than an expected predetermined size, and the use or lose decision value is then used to set an overflow field in the output tuple (Baker et al: see column 18, lines 56-64).

　　　　Referring to claim 6, Baker/Hausman/Abraham discloses an apparatus as in claim 5 wherein the use or lose decision value is not asserted when a buffer local to the programmable data streaming processor is full; and means for appending an overflow filter bit to a tuple that indicates a transfer of a tuple that should be ignored (Baker: see column 18, lines 56-64).

　　　　Referring to claim 7, Baker/Hausman/Abraham discloses an apparatus as in claim 1 additionally comprising: a Direct Memory Access (DMA) interface, coupled to

the output FIFO, to provide direct access to a memory in the Job Processing Unit

(Baker: see column 6, lines 24-25 and column 19, lines 15-25).

Referring to claim 8, Baker/Hausman/Abraham discloses an apparatus as in

claim 1 wherein the use or lose value is used to reset the output FIFO write pointer so

any prior fields in the present tuple are discarded (Baker: see column 12, lines 18-34 –

after the data is written, it is considered to be removed from the temporary storage of

the buffer, therefore being deleted).

Referring to claim 9, Baker/Hausman/Abraham discloses an apparatus as in

claim 1 wherein the overflow filter bit is inserted in a length field appended to record

fragments (Baker: see column 34, lines 56-62).

Referring to claim 10, Baker/Hausman/Abraham discloses an apparatus as in

claim 1 wherein an invalid field is appended to a tuple to indicate the results of

transaction ID processing (Baker: see column 12, line 62 – column 13, line 16).

Referring to claim 11, Baker/Hausman/Abraham discloses an apparatus as in

claim 10 wherein the invalid field indicates that the TID mode marks return tuple (Baker:

see column 12, line 62 – column 13, line 16).

Referring to claim 12, Baker/Hausman/Abraham discloses an apparatus as in

claim 10 wherein the invalid field indicates that the tuple should not have been returned

but the output FIFO overflowed (Baker: see column 31, lines 10-22 and column 34, lines

56-62).

Referring to claim 13, Baker/Hausman/Abraham discloses an apparatus as in

claim 1 further comprising: a register reflecting the final PSDP status which is read by

the CPU to identify whether any overflow or TID status bits are set in any of the tuples

(Baker: see column 29, line 63 – column 30, line 21).

  Referring to claim 14, Baker/Hausman/Abraham discloses an apparatus as in

claim 1 wherein the use or lose decision value represents DeMorgan's Law reduction of

multiple instructions (Baker: see column 5, lines 25-34).

Response to Arguments

11. Referring to Applicant's argument on page 9 of the the Remarks, the Applicant

states "Neither Baker nor Hausman performs initial pre-processing functions on the data

from a data streaming data source."

  In response to applicant's arguments, the recitation of "primitive initial processing

functions" has not been given patentable weight because the recitation occurs in the

preamble. A preamble is generally not accorded any patentable weight where it merely

recites the purpose of a process or the intended use of a structure, and where the body

of the claim does not depend on the preamble for completeness but, instead, the

process steps or structural limitations are able to stand alone. See *In re Hirao*, 535

F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88

USPQ 478, 481 (CCPA 1951).

12. Referring to Applicant's argument on pages 10-11 of the the Remarks, the

Applicant states "Hausman neither selects fields to be assembled into output tuples nor

assembles fields into tuples."

The examiner respectfully disagrees. It is noted that paragraph [0039] of
Hausman discloses the insertion of delimiters between records and between individual
elements within records. Paragraph [0045] states "A queue 108 receives and forwards
the data stream, API 104 reviews data records included within the stream, as for
example by reading data type codes included as elements in the records and comparing
them to client and/or subclient request lists; and selects for example by assigning
suitable identification tags to the records, or by writing them to a cache, buffer or other
..." Since the output data includes delimiters between records and between elements
within the records, and the API 104 reviews the stream in order to be able to compare
records and elements within the records to client request lists, Hausman is considered
to teach the limitation of "a data engine, arranged to receive output data from the data
streaming interface, determine field boundaries therein." Paragraph [0048] of Hausman
states "... API 104 formats (or re-formats, i.e., maps, records into any form(s) requested
by the individual user(s), as for example by re-ordering, deleting, editing, and/or adding
elements within the information strings carried by records." Also, according to [0045],
only the records that are requested by the users are sent to that particular user [JPU] for
processing. According to [0057], selected data records are mapped and distributed via
mapped data streams. Therefore, the reformatting of the records assembles the
received data into a records with elements that meet the requirement of the user
[process fields to select one or more fields to be assembled into output tuples]. These
records are then sent via mapped data streams wherein each user receives only
requested records. The concepts of deleting elements from records and not sending

particular records to particular users is considered to represent the concept of the use

or lose decision. The records are considered to represent the tuples since both a tuple

and a record equate to a row of data. The record in this instance includes a plurality of

elements. Paragraph [0065] of Hausman states "Optionally too records identified for

specific user are filtered according to criteria established by users. For example, a given

user may wish to see only stock offerings related to IBM issues; all other records of type

'stock offering' would be filtered out of that user's data stream." The concept of filtering

is considered to be analogous to the concept of a use or lose decision. As mentioned

above, the records are considered to represent tuples.

Thus, Hausman's record is considered to meet the requirement of a tuple. A

tuple is a row in a database. In this instance, a record is also considered to represent a

row since it consists of many elements.

Furthermore, it is noted that the claim language fails to state that the received

data is not previously field delinetated.

13.   The argument on page 13 of the Remarks stating that Hausman fails to teach a

use or lose decision is moot in view of new grounds of rejection.

14.   In regards to Applicant's argument on page 14 of the Remarks, the Applicant

states that "Hausman does not contain logic; Hausman selects the records based in

software."

The examiner respectfully disagrees that software does not meet the

requirements of the term logic. When the term logic is given the broadest reasonable

definition by one of ordinary skill in the art, it can interpreted as cose or software.

15.   In regards to Applicant's arguements on pages 15-17 of the Remarks that it
would not be obvious to combine Baker and Hausman, the examiner respectfully
disagrees.

        The motivation provided is that Hausman provides the feature of be able to filter
data. It is well known to one of ordinary skill in the art that filtering data decreases the
amount of data. In this case, the data is being sent across a network and therefore
reducing the amount of information of data would reduce for example, the required
bandwidth. The results of decreasing the amount of data sent across a network are well
known in the art.

16.   Applicant's arguments with respect to claim 2 have been considered but are moot
in view of the new ground(s) of rejection.

17.   In regards to claims 3 and 4, the applicants state that Baker/Hausman fails to
disclose a Transaction Identifier, TID processing and TID processing and data engine
logic being executed in parallel. The cited portion of Hausman are paragraphs [0063]
and [0064]. The disclosed routing or address tags are considered to represent the
TIDs. The records are processed based on these TIDs and the data engine logic
utilizes these IDs to determine which records to forward to which users.

18.   In regards to claims 5 and 6, the applicants state "Baker/Hausman does not
overcome any of the deficiencies of Baker and fails to disclose not asserting the use or
lose decision value when a buffer local to the programmable data streaming processor
is full; and means for appending an overflow filter bit to a tuple that indicates a transfer
of a tuple that should be ignored. The value of the valid bit used in Baker indicates

whether the specific byte is valid or not. Baker does not, however, not assert a use/lose

decision value when a buffer local to the programmable data streaming processor is full

and make no use of an overflow filter bit to a tuple that indicates a transfer of a tuple

that should be ignored." If the byte is not valid then the processor is considered to be

full.

19.   In regards to claims 9 and 10, the applicant argues that Baker fails to disclose an

overflow filter bit. Hausman discloses parsing the filter which is considered to represent

this step.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY LOVEL whose telephone number is (571)272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Cottingham/   /Kimberly Lovel/
Supervisory Patent Examiner, Art Unit 2167   Examiner
                                                       Art Unit 2167

3 January 2009
/kml/